

CLAIMS

What is claimed is:

1. A mobile terminal comprising:

a body;

a flip portion; and

a hinge connecting said body to said flip portion, said hinge comprising an antenna for use by an electronic circuit positioned within said mobile terminal.

2. The mobile terminal of claim 1 wherein said antenna is an inverted-F antenna.

3. The mobile terminal of claim 1 wherein said antenna is operative at frequencies between 2.4 and 2.485 GHz.

4. The mobile terminal of claim 1 wherein said antenna operates within the ISM band.

5. The mobile terminal of claim 1 wherein said antenna receives a GPS signal.

6. The mobile terminal of claim 1 further comprising a second hinge forming a second antenna.

7. The mobile terminal of claim 6 wherein said first antenna is adapted for use at frequencies ranging from 2.4 to 2.485 GHz and said second antenna is adapted for receiving a GPS signal.

8. The mobile terminal of claim 1 further comprising a printed circuit board adapted to hold said electronic circuit.

5 9. The mobile terminal of claim 8 further comprising a fastener attaching said antenna to said printed circuit board.

10. The mobile terminal of claim 9 wherein said fastener is a screw.

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10 11. The mobile terminal of claim 10 further comprising a second fastener attaching said antenna to said printed circuit board.

12. The mobile terminal of claim 11 wherein one of said fasteners acts as a connection to ground for said antenna and the other of said fasteners acts as an RF feed for said antenna.

15 13. A method of constructing a mobile terminal, comprising:
positioning a printed circuit board in the mobile terminal;
fastening an antenna to said printed circuit board; and
using said antenna as a hinge for a flip portion of said mobile terminal.

20 14. The method of claim 13 wherein fastening an antenna to said printed circuit board comprises fastening an inverted-F antenna to said printed circuit board.

15. The method of claim 13 further comprising receiving and transmitting Bluetooth communications through said antenna.

16. The method of claim 13 further comprising receiving a GPS signal through said antenna.

17. The method of claim 13 wherein fastening an antenna to said printed circuit board comprises using a first fastener as a connection to ground and using a second fastener as an RF feed.

18. The method of claim 13 further comprising opening and closing said hinge during operation of the mobile terminal.

19. A mobile terminal comprising:

a body;

a printed circuit board positioned inside said body;

a flip portion; and

a hinge, said hinge forming an inverted-F antenna and hingedly securing said flip portion to said body, said hinge electrically coupled to said printed circuit board.

20. The mobile terminal of claim 19 further comprising a voice communication transceiver and a second antenna adapted for use with said voice communication transceiver, said voice communication transceiver positioned within said body, and said second antenna spaced from said inverted-F antenna.

21. A method of constructing a mobile terminal, comprising:

connecting a flip portion to a body portion of the mobile terminal using a hinge that also comprises an antenna.

5 22. A mobile terminal comprising:

a body;

a printed circuit board positioned within said body;

electronic circuitry positioned on said printed circuit board;

10 at least one antenna for voice communications at a first operating frequency, said at least one antenna operatively connected to said electronic circuitry;

a flip portion;

15 a hinge comprising an auxiliary antenna connecting said flip portion to said body, said antenna operatively connected to said electronic circuitry, said auxiliary antenna for communication at a second operating frequency.

23. The mobile terminal of claim 22 wherein said auxiliary antenna comprises a GPS receiver antenna.

20 24. The mobile terminal of claim 22 wherein said auxiliary antenna comprises a bluetooth antenna.